

## Title (en)

HIGH BANDWIDTH AND LOW LATENCY HYBRID COMMUNICATION TECHNIQUES FOR A NAVIGATION SYSTEM

## Title (de)

HYBRIDKOMMUNIKATIONSTECHNIKEN MIT HOHER BANDBREITE UND NIEDRIGER LATENZ FÜR EIN NAVIGATIONSSYSTEM

## Title (fr)

TECHNIQUES DE COMMUNICATION HYBRIDES À GRANDE LARGEUR DE BANDE ET À FAIBLE LATENCE POUR SYSTÈME DE NAVIGATION

## Publication

**EP 3680682 A1 20200715 (EN)**

## Application

**EP 20157547 A 20181114**

## Priority

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- EP 18206117 A 20181114

## Abstract (en)

A navigation system is presented that comprises a tracker including an infrared (IR) transmitter, an IR receiver, one or more tracking markers, and one or more inertial sensors configured to generate inertial data. The navigation system also comprises a localization device including an IR receiver, an IR transmitter, and one or more tracking sensors. The localization device is configured to utilize IR communication according to a first modulation method to: detect a position of the one or more tracking markers of the tracker with the one or more tracking sensors; and communicate, using the IR transmitter, with the IR receiver of the tracker to manage an operating parameter of the tracker. The localization device is further configured to utilize IR communication according to a second modulation method different from the first modulation method to: wirelessly receive, with the IR receiver, the inertial data generated by the tracker and transmitted by the IR transmitter of the tracker in accordance with the managed operating parameter of the tracker.

## IPC 8 full level

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## CPC (source: EP US)

**A61B 34/20** (2016.02 - EP US); **A61B 90/39** (2016.02 - US); **G01C 21/1656** (2020.08 - EP US); **G01S 5/0294** (2013.01 - US); **G01S 5/16** (2013.01 - EP US); **G01S 17/66** (2013.01 - EP US); **G01S 17/86** (2020.01 - EP US); **H04B 1/02** (2013.01 - US); **H04B 10/1141** (2013.01 - US); **A61B 34/30** (2016.02 - US); **A61B 2034/2048** (2016.02 - EP US); **A61B 2034/2055** (2016.02 - EP US); **A61B 2034/2057** (2016.02 - US); **A61B 2034/2068** (2016.02 - US); **A61B 2090/3945** (2016.02 - US); **G08C 17/02** (2013.01 - EP US); **G08C 23/04** (2013.01 - EP US); **H04N 5/04** (2013.01 - US)

## Citation (applicant)

- US 201313958834 A 20130805
- US 201715840278 A 20171213
- US 201213600888 A 20120831
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- US 7725162 B2 20100525 - MALACKOWSKI DONALD W [US], et al
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## Citation (search report)

- [A] US 2001034530 A1 20011025 - MALACKOWSKI DONALD W [US], et al
- [A] US 2017245945 A1 20170831 - ZUHARS JOEL [US], et al
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## Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

## DOCDB simple family (publication)

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## DOCDB simple family (application)

**EP 18206117 A 20181114**; EP 20157547 A 20181114; EP 21155486 A 20181114; US 201816189241 A 20181113; US 201916730105 A 20191230